

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

03C0



In re application of: #9

Fernando DOÑATE et al.

Appl. No. 10/074,225

Filed: February 14, 2002

For: HISTIDINE PROLINE RICH  
GLYCOPROTEIN (HPTG) AS AN  
ANTIANGIOGENIC AND ANTI-  
TUMOR AGENT

Art Unit: 1636

Examiner: Unknown

Atty. Docket No. 38342-178463

Customer No.



26694

PATENT TRADEMARK OFFICE

**STATEMENT TO SUPPORT FILING AND SUBMISSION**  
**IN ACCORDANCE WITH 37 CFR §§1.821-1.825**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In response to the Notice to Comply dated September 3, 2002, the undersigned hereby states that the content of the Sequence Listing submitted herewith, the Sequence Listing and the computer readable copy submitted herewith, in accordance with 37 CFR 1.821(c) and (e), respectively, are the same.

In the unlikely event that the Patent Office determines that an extension and/or other relief is required as a result of this statement, applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due to our Deposit Account No. 22-0261 and advise us accordingly.

Date: Sept 19 2002

Respectfully submitted,

Shmuel Livnat

Registration No. 33,949

VENABLE

P.O. Box 34385

Washington, D.C. 20043-9998

Telephone: (202) 216-8158

Telefax: (202) 962-8300



## SEQUENCE LISTING

<110> DONATE, Fernando  
PLUNKETT, Marian L  
HARRIS, Scott  
MAZAR, Andrew P

<120> HISTIDINE PROLINE RICH GLYCOPROTEIN (HPRG) AS AN ANTI-ANGIOGENIC AND  
ANTI-TUMOR AGENT

<130> 38342-178463

<140> US 10/074,225

<141> 2002-02-14

<150> US 60/268,370

<151> 2001-02-14

<160> 11

<170> PatentIn version 3.1

<210> 1

<211> 525

<212> PRT

<213> Homo sapiens

<400> 1

Met Lys Ala Leu Ile Ala Ala Leu Leu Leu Ile Thr Leu Gln Tyr Ser  
1 5 10 15

Cys Ala Val Ser Pro Thr Asp Cys Ser Ala Val Glu Pro Glu Ala Glu  
20 25 30

Lys Ala Leu Asp Leu Ile Asn Lys Arg Arg Arg Asp Gly Tyr Leu Phe  
35 40 45

Gln Leu Leu Arg Ile Ala Asp Ala His Leu Asp Arg Val Glu Asn Thr  
50 55 60

Thr Val Tyr Tyr Leu Val Leu Asp Val Gln Glu Ser Asp Cys Ser Val  
65 70 75 80

Leu Ser Arg Lys Tyr Trp Asn Asp Cys Glu Pro Pro Asp Ser Arg Arg  
85 90 95

Pro Ser Glu Ile Val Ile Gly Gln Cys Lys Val Ile Ala Thr Arg His  
100 105 110

Ser His Glu Ser Gln Asp Leu Arg Val Ile Asp Phe Asn Cys Thr Thr  
115 120 125

Ser Ser Val Ser Ser Ala Leu Ala Asn Thr Lys Asp Ser Pro Val Leu  
130 135 140

Ile Asp Phe Phe Glu Asp Thr Glu Arg Tyr Arg Lys Gln Ala Asn Lys  
145 150 155 160

Ala Leu Glu Lys Tyr Lys Glu Glu Asn Asp Asp Phe Ala Ser Phe Arg  
165 170 175

Val Asp Arg Ile Glu Arg Val Ala Arg Val Arg Gly Gly Glu Gly Thr  
180 185 190

Gly Tyr Phe Val Asp Phe Ser Val Arg Asn Cys Pro Arg His His Phe  
195 200 205

Pro Arg His Pro Asn Val Phe Gly Phe Cys Arg Ala Asp Leu Phe Tyr  
210 215 220

Asp Val Glu Ala Leu Asp Leu Glu Ser Pro Lys Asn Leu Val Ile Asn  
225 230 235 240

Cys Glu Val Phe Asp Pro Gln Glu His Glu Asn Ile Asn Gly Val Pro  
245 250 255

Pro His Leu Gly His Pro Phe His Trp Gly Gly His Glu Arg Ser Ser  
260 265 270

Thr Thr Lys Pro Pro Phe Lys Pro His Gly Ser Arg Asp His His His  
275 280 285

Pro His Lys Pro His Glu His Gly Pro Pro Pro Pro Pro Asp Glu Arg  
290 295 300

Asp His Ser His Gly Pro Pro Leu Pro Gln Gly Pro Pro Pro Leu Leu  
305 310 315 320

Pro Met Ser Cys Ser Ser Cys Gln His Ala Thr Phe Gly Thr Asn Gly  
325 330 335

Ala Gln Arg His Ser His Asn Asn Asn Ser Ser Asp Leu His Pro His  
340 345 350

Lys His His Ser His Glu Gln His Pro His Gly His His Pro His Ala  
355 360 365

His His Pro His Glu His Asp Thr His Arg Gln His Pro His Gly His  
 370 375 380

His Pro His Gly His His Pro His Gly His His Pro His Gly His His  
 385 390 395 400

Pro His Gly His His Pro His Cys His Asp Phe Gln Asp Tyr Gly Pro  
 405 410 415

Cys Asp Pro Pro Pro His Asn Gln Gly His Cys Cys His Gly His Gly  
 420 425 430

Pro Pro Pro Gly His Leu Arg Arg Arg Gly Pro Gly Lys Gly Pro Arg  
 435 440 445

Pro Phe His Cys Arg Gln Ile Gly Ser Val Tyr Arg Leu Pro Pro Leu  
 450 455 460

Arg Lys Gly Glu Val Leu Pro Leu Pro Glu Ala Asn Phe Pro Ser Phe  
 465 470 475 480

Pro Leu Pro His His Lys His Pro Leu Lys Pro Asp Asn Gln Pro Phe  
 485 490 495

Pro Gln Ser Val Ser Glu Ser Cys Pro Gly Lys Phe Lys Ser Gly Phe  
 500 505 510

Pro Gln Val Ser Met Phe Phe Thr His Thr Phe Pro Lys  
 515 520 525

<210> 2  
 <211> 2051  
 <212> DNA  
 <213> Homo sapiens

<400> 2  
 atataatata aactaataaa gatcaggaaa taattaatgt ataccgtaat gtagaccgac 60  
 tcagggtatgt aagtagagaa tatgaagggtg aattagataa tttaaagggat gggtttaacaa 120  
 aatgaaggca ctcattgcag cactgctttt gatcacattg cagtattcgt gtgccgtgag 180  
 tccactgac tgcagtgtg ttgagccgga ggctgagaaa gctctagacc tgatcaacaa 240  
 aaggcgacgg gatggctacc ttttccaatt gctgcggatt gctgatgcc acttggaacag 300  
 agtggaaaat acaactgtat attacttagt cttagatgtg caagaatcgg actgttcggt 360

cctatccagg aaatactgga atgactgtga gccacctgat tccagacgtc catctgaaat	420
agtgatcgga caatgtaagg taatagctac aagacattcc catgaatctc aggacctcag	480
agtgattgac tttaactgca ccacaagttc tgtctcttca gcactggcca ataccaaaaga	540
tagtccggtc ctcatagatt tctttgagga tactgagcgc tacagaaaac aagccaacaa	600
agcccttgag aagtacaaag aggagaatga tgactttgcc tctttcagag tggaccgaat	660
cgagagagtt gcaagagtga gaggagggga aggaactggt tacttcgtgg acttctctgt	720
gcggaactgc cccagacacc atttccccag acacccaat gtctttggat tctgcagagc	780
agatttggtc tatgatgtag aagccttgga cttggaaagc ccgaaaaacc ttgtcataaa	840
ctgtgaagtc ttcgaccctc aggaacatga gaacatcaat ggtgtaccgc ctcatctggg	900
acatcccttc cactggggtg ggcattgagcg ttcttctacc accaagcctc cattcaagcc	960
ccatggatct agagatcatc atcatcccca caagccacac gaacatggac cccacactcc	1020
tccagatgaa agagatcact cacatggacc cccacttcca caaggccctc ctccactatt	1080
gcccattgac tgctcaagtt gtcaacatgc cacttttggc acaaattggg cccaaagaca	1140
ttctcataat aataattcca gtgacctcca tccccataag catcattccc atgaacagca	1200
tccccacgga caccatcccc atgcacacca tctcatgaa catgatacc atagacagca	1260
tccccatgga caccaccccc atggacacca tctcatgga caccaccccc atggacacca	1320
tccccatgga caccatcccc actgcatga tttccaagac tatggacctt gtgaccacc	1380
accccataac caaggctact gttgcatgg ccacggccca ccacctgggc acttaagaag	1440
gcgaggccca ggtaaaggac ccgctccctt ccattgcaga caaattggat ctgtgtaccg	1500
actccctcct ctaagaaaag gtgaggtgct gccacttcct gaggccaatt ttcccagctt	1560
cccattgccg caccacaaac atcctctaaa gccagacaat cagcccttcc ctcaatcagt	1620
ctctgaatca tgtccaggga agttcaagag tgggtttcca caagtttcca tgttttttac	1680
acatacatct ccaaaataaa atgtgattcc tttgaagagg aaaatgaata atacattgaa	1740
ttagaaacat aaataaaatg accagtaatt gtgaaaatta cagttctttt caacctactt	1800
tcatactgaa gatgcagcaa aatgtgaatg ggaaaagaga tggcctgaga agagagatca	1860
aatggaaagg agaggaaaga actcagtgtt gcctattagt agttaattct gtcactcacc	1920
actacatcac ttgagacaaa tctatgccac tcagaatctc cttctttcct ggacttaact	1980
ctaattctag agtctctgtt actgcttggg ctatacctgg gcatactaataaagtatgggt	2040
attgaaacta t	2051

<210> 3  
<211> 526  
<212> PRT  
<213> Lepus americanus

<400> 3

Ala Thr Leu Gln Cys Ser Trp Ala Leu Thr Pro Thr Asp Cys Lys Thr  
1 5 10 15

Thr Lys Pro Leu Ala Glu Lys Ala Leu Asp Leu Ile Asn Lys Trp Arg  
20 25 30

Arg Asp Gly Tyr Leu Phe Gln Leu Leu Arg Val Ala Asp Ala His Leu  
35 40 45

Asp Gly Ala Glu Ser Ala Thr Val Tyr Tyr Leu Val Leu Asp Val Lys  
50 55 60

Glu Thr Asp Cys Ser Val Leu Ser Arg Lys His Trp Glu Asp Cys Asp  
65 70 75 80

Pro Asp Leu Thr Lys Arg Pro Ser Leu Asp Val Ile Gly Gln Cys Lys  
85 90 95

Val Ile Ala Thr Arg Tyr Ser Asp Glu Tyr Gln Thr Leu Arg Leu Asn  
100 105 110

Asp Phe Asn Cys Thr Thr Ser Ser Val Ser Ser Ala Leu Ala Asn Thr  
115 120 125

Lys Asp Ser Pro Val Leu Phe Asp Phe Ile Glu Asp Thr Glu Pro Phe  
130 135 140

Arg Lys Ser Ala Asp Lys Ala Leu Glu Val Tyr Lys Ser Glu Ser Glu  
145 150 155 160

Ala Tyr Ala Ser Phe Arg Val Asp Arg Val Glu Arg Val Thr Arg Val  
165 170 175

Lys Gly Gly Glu Arg Thr Asn Tyr Tyr Val Asp Phe Ser Val Arg Asn  
180 185 190

Cys Ser Arg Ser His Phe His Arg His Pro Ala Phe Gly Phe Cys Arg  
195 200 205

Ala Asp Leu Ser Phe Asp Val Glu Ala Ser Asn Leu Glu Asn Pro Glu  
210 215 220

Asp Val Ile Ile Ser Cys Glu Val Phe Asn Phe Glu Glu His Gly Asn  
225 230 235 240

Ile Ser Gly Phe Arg Pro His Leu Gly Lys Thr Pro Leu Gly Thr Asp  
245 250 255

Gly Ser Arg Asp His His His Pro His Lys Pro His Lys Phe Gly Cys  
260 265 270

Pro Pro Pro Gln Glu Gly Glu Asp Phe Ser Glu Gly Pro Pro Leu Gln  
275 280 285

Gly Gly Thr Pro Pro Leu Ser Pro Pro Phe Arg Pro Arg Cys Arg His  
290 295 300

Arg Pro Phe Gly Thr Asn Glu Thr His Arg Phe Pro His His Arg Ile  
305 310 315 320

Ser Val Asn Ile Ile His Arg Pro Pro Pro His Gly His His Pro His  
325 330 335

Gly Pro Pro Pro His Gly His His Pro His Gly Pro Pro Pro His Gly  
340 345 350

His Pro Pro His Gly Pro Pro Pro Arg His Pro Pro His Gly Pro Pro  
355 360 365

Pro His Gly His Pro Pro His Gly Pro Pro Pro His Gly His Pro Pro  
370 375 380

His Gly Pro Pro Pro His Gly His Pro Pro His Gly Pro Pro Pro His  
385 390 395 400

Gly His Pro Pro His Gly His Gly Phe His Asp His Gly Pro Cys Asp  
405 410 415

Pro Pro Ser His Lys Glu Gly Pro Gln Asp Leu His Gln His Ala Met  
420 425 430

Gly Pro Pro Pro Lys His Pro Gly Lys Arg Gly Pro Gly Lys Gly His  
435 440 445

Phe Pro Phe His Trp Arg Arg Ile Gly Ser Val Tyr Gln Leu Pro Pro  
 450 455 460

Leu Gln Lys Gly Glu Val Leu Pro Leu Pro Glu Ala Asn Phe Pro Gln  
 465 470 475 480

Leu Leu Leu Arg Asn His Thr His Pro Leu Lys Pro Glu Ile Gln Pro  
 485 490 495

Phe Pro Gln Val Ala Ser Glu Arg Cys Pro Glu Glu Phe Asn Gly Glu  
 500 505 510

Phe Ala Gln Leu Ser Lys Phe Phe Pro Ser Thr Phe Pro Lys  
 515 520 525

<210> 4  
 <211> 1662  
 <212> DNA  
 <213> Lepus americanus

<220>  
 <221> misc\_feature  
 <222> (1604)..(1604)  
 <223> N can be A, C, G or T

<400> 4  
 gcgccacact gcagtgttcg tgggctttga ctccactga ctgcaaaact accaagccct 60  
 tggctgagaa agctctagac ctgatcaata aatggcgacg ggatggctac cttttccagt 120  
 tgctgcgagt cgctgatgcc cacttggacg gagcggaaatc tgccactgtc tactatttag 180  
 tcttagatgt gaaagagact gactgttcag tgctatccag gaaacactgg gaagactgtg 240  
 acccagatct tactaaacgt ccatctcttg acgtgattgg gcaatgtaag gtgatagcta 300  
 ccagatatct ggatgaatat cagactctaa gattgaatga ctttaactgc accacgagtt 360  
 ccgtctcttc agccctggcc aacactaaag acagtcctgt tctctttgat ttcacgagg 420  
 acacggagcc cttcagaaaa tccgcggaca aagccctgga ggtgtacaaa agtgaaagcg 480  
 aggcgtatgc ctctttcaga gtggaccggg tagagagagt cacaaggggtg aaaggaggag 540  
 agagaaccaa ttactatgtg gacttctccg tgaggaactg ctccaggtct cacttcaca 600  
 gacaccccg ctttgggttc tgcagagcag atctgtcctt tgatgtagaa gcctcgaact 660  
 tggaaaacc agaagacgtt attataagct gtgaagtctt taactttgag gaacatggaa 720  
 acatcagtg ttttcgaccc catttgggca agactccact tgggactgat ggatccagag 780



atcatcatca tccccacaag ccacataagt ttggatgccc acctcccca gaaggggaag 840  
atttctcgga aggaccacca cttcaagggtg gaaccccccc actctcccc cccttcaggc 900  
caagatgtcg tcatcgccct tttggcacca atgaaacca tcggttcct catcatcgaa 960  
tttcagtga catcatccat aggccccctc cccatggaca tcacccccat gggccccctc 1020  
cccatggaca tcacccccat gggccccctc cccatggaca tcctcctcat ggacccccctc 1080  
cccgacatcc tccccatggg cctcctcccc atggacatcc ccccatgga cccctcccc 1140  
atggacatcc tcctcatgga cccctcccc atggacatcc tccccatggg cccctcccc 1200  
atggacatcc tccccatggc catgggtttcc atgaccatgg accctgtgac ccaccatccc 1260  
ataaagaagg tcccaagac ctccatcagc atgccatggg accaccacct aagcaccag 1320  
gaaagagagg tccaggtaaa ggacactttc ccttcactg gagaagaatt gggctctgtt 1380  
accaactgcc cccactgcag aaagggtgaag tccttcccct tcccgaagcc aattttcccc 1440  
agcttctctt gcggaaccac acccacctc taaagcccga gatccagccc ttccctcagg 1500  
tagcctctga gcgctgtcca gaggagtcca atgggtgagtt tgcacaactc tccaagtttt 1560  
tcpcatctac atttccaaaa tgaaatctga tttccttgat gggnaacaat gaatgatatt 1620  
ctgtattagc accataaata aaatgtggcc atgatgaatg ca 1662

<210> 5  
<211> 148  
<212> PRT  
<213> Homo sapiens

<400> 5

His Pro His Lys His His Ser His Glu Gln His Pro His Gly His His  
1 5 10 15

Pro His Ala His His Pro His Glu His Asp Thr His Arg Gln His Pro  
20 25 30

His Gly His His Pro His Gly His His Pro His Gly His His Pro His  
35 40 45

Gly His His Pro His Gly His His Pro His Cys His Asp Phe Gln Asp  
50 55 60

Tyr Gly Pro Cys Asp Pro Pro Pro His Asn Gln Gly His Cys Cys His  
65 70 75 80

Gly His Gly Pro Pro Pro Gly His Leu Arg Arg Arg Gly Pro Gly Lys  
85 90 95

Gly Pro Arg Pro Phe His Cys Arg Gln Ile Gly Ser Val Tyr Arg Leu  
100 105 110

Pro Pro Leu Arg Lys Gly Glu Val Leu Pro Leu Pro Glu Ala Asn Phe  
115 120 125

Pro Ser Phe Pro Leu Pro His His Lys His Pro Leu Lys Pro Asp Asn  
130 135 140

Gln Pro Phe Pro  
145

<210> 6  
<211> 101  
<212> PRT  
<213> Lepus americanus

<400> 6

Ser Val Asn Ile Ile His Arg Pro Pro Pro His Gly His His Pro His  
1 5 10 15

Gly Pro Pro Pro His Gly His His Pro His Gly Pro Pro Pro His Gly  
20 25 30

His Pro Pro His Gly Pro Pro Pro Arg His Pro Pro His Gly Pro Pro  
35 40 45

Pro His Gly His Pro Pro His Gly Pro Pro Pro His Gly His Pro Pro  
50 55 60

His Gly Pro Pro Pro His Gly His Pro Pro His Gly Pro Pro Pro His  
65 70 75 80

Gly His Pro Pro His Gly His Gly Phe His Asp His Gly Pro Cys Asp  
85 90 95

Pro Pro Ser His Lys  
100

<210> 7  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<220>

<221> MISC\_FEATURE

<222> (1)..(2)

<223> Xaa at positions 1 and 2 can be either His or Pro

<400> 7

Xaa Xaa Pro His Gly

1 5

<210> 8

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 8

His His Pro His Gly

1 5

<210> 9

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 9

His Pro Pro His Gly

1 5

<210> 10

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 10

Pro Pro Pro His Gly

1 5

<210> 11  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Peptide

<400> 11

Ala Pro Pro His Gly  
1 5